PRAIRIE VIEW A&M UNIVERSITY

THESIS AND DISSERTATION MANUAL

Instructions for Preparing Theses and Dissertations

Graduate School
Prairie View A&M University
Wilhelmina F. Delco Building, Suite 120
P.O. Box 519; MS 2800
Prairie View, Texas 77446-0519
August 2012

http://www.pvamu.edu/pages/1210.asp
Preface

The purpose of the Prairie View A&M University (PVAMU) Thesis & Dissertation manual is to provide guidance and clarity in the support of students, faculty advisors and research committee members with the preparation and production of a manuscript of scholarly attributes. This document ensures that university guidelines are followed in order to achieve the style and format uniformity of the highest quality while allowing for timely clearance for graduation.

Where the PVAMU Graduate Catalog expressly refers to specific requirements for any particular departmental program, differences between the PVAMU Graduate Catalog and this PVAMU Dissertation and Thesis Manual should be resolved by the Graduate Catalog superseding the conflicting materials.

Acknowledgement


PVAMU acknowledges the contributions of Dr. John Attia, Dr. Myrna Cintron, Dr. Hylton G. McWhinney, Dr. Lisa Hobson, and Dr. Robert Grundy for the development of this document.
Table of Contents

Preface................................................................................................................................................... ii

Chapter 1  Writing the Thesis/Dissertation ......................................................................................... 1
  1.1 PVAMU Standards and Requirements......................................................................................... 1
  1.2 Presentation of the Material......................................................................................................... 1
  1.3 Selecting and Using a Journal Model .......................................................................................... 1

Chapter 2  Thesis/Dissertation Content .............................................................................................. 2
  2.1 Main Body of the Thesis/Dissertation ......................................................................................... 2
  2.2 Chapter I: Introduction ............................................................................................................... 2
  2.3 Chapter II: Literature Review .................................................................................................... 2
  2.4 Chapter III: Methods .................................................................................................................. 2
  2.5 Chapter IV: Results ...................................................................................................................... 3
  2.6 Chapter V: Conclusions and Future Work .................................................................................. 3
  2.7 References ................................................................................................................................... 3
  2.8 Appendices .................................................................................................................................. 3

Chapter 3  Graduate Thesis or Dissertation Committee ................................................................. 4
  3.1 Committee Composition: Thesis and Dissertation ...................................................................... 4
  3.2 Committee Selection ..................................................................................................................... 4
  3.3 Choosing a Thesis or Dissertation Committee ............................................................................ 4
  3.4 Committee Approval .................................................................................................................... 4
  3.5 Role of the Thesis or Dissertation Committee Chair ................................................................... 5
  3.6 Role of the Thesis or Dissertation Committee Members ............................................................ 5
Chapter 4  Publication of the Research and Copyright Issues ................................. 7

4.1  Publication Scenarios ......................................................................................... 7
4.2  Publication of Thesis or Dissertation Material before being Submitted.............. 7
4.3  The Student’s Already Published Material is used in the Thesis or Dissertation .... 7
4.4  Future Publication of Thesis or Dissertation Material or Research.................... 7
4.5  Including Others’ Copyrighted Material in the Thesis or Dissertation ............... 8
4.6  Registering Copyright ......................................................................................... 8
4.7  The Optional Copyright Page ............................................................................. 8

Chapter 5  Organizing and Formatting the Manuscript ........................................... 10

5.1  Thesis or Dissertation Content Organization ..................................................... 10
5.2  Prairie View A&M University Format Requirements .......................................... 10
  5.2.1  Paper Requirement ......................................................................................... 10
  5.2.2  Font Size ........................................................................................................ 10
  5.2.3  Standard Margin Settings ................................................................................ 10
  5.2.4  Vertical Line Spacing ....................................................................................... 11
  5.2.5  Page Numbers ................................................................................................ 11
  5.2.6  Title Page ....................................................................................................... 11
  5.2.7  Abstract .......................................................................................................... 11
  5.2.8  Binding ........................................................................................................... 12
  5.2.9  Figures/Tables ................................................................................................ 12
5.3  Equations ............................................................................................................ 13
5.4  Reference Listings and Text Citation ................................................................. 13
  5.4.1  Consistency in Reference Listings ................................................................. 13
Appendices .......................................................... 14
Appendix Headings .................................................. 14

Chapter 6  Thesis or Dissertation Submittal and Review .......... 14

  6.1  Committee Review and Approval of the Thesis or Dissertation ............................................. 15
  6.2  Availability of the Thesis or Dissertation to the Public ......................................................... 15
  6.3  Overview of the Correction and Review Process ................................................................. 15
  6.4  Overview of the Submittal Process ..................................................................................... 16
  6.5  PV Graduate School Corrections and Deadlines ................................................................. 16
  6.6  PVAMU Thesis or Dissertation Binding Requirements .................................................... 16
  6.7  Spine Example .................................................................................................................. 17

Chapter 7  Writing the Preliminary Pages ................................. 18

  7.1  Sample Title Page .......................................................... 18
  7.2  Approval Page ................................................................... 18
      7.2.1  General Format ........................................................ 18
      7.2.2  Title of Thesis or Dissertation ..................................... 18
      7.2.3  Thesis or Dissertation Author Statement ...................... 18
      7.2.4  Submittal Statement ................................................... 18
      7.2.5  Committee Member Names and Positions ..................... 19
      7.2.6  Date ............................................................................. 19
      7.2.7  Major Subject .......................................................... 19
  7.3  7.3 Abstract ...................................................................... 19
      7.3.1  General Format ......................................................... 19
      7.3.2  Preliminary Lines ...................................................... 19
      7.3.3  Abstract Text .......................................................... 20
Appendix A  Samples of Page Formatting Required with Instructions .......... 24

Appendix B  Juvenile Justice Dissertation Timeline and Requirements .......... 40

Appendix C  Educational Leadership Program............................................. 46

Appendix D  English M.A. Thesis Requirements .......................................... 49

Appendix E  College of Engineering Requirements ....................................... 50
Chapter 1  Writing the Thesis/Dissertation

1.1  PVAMU Standards and Requirements

This manual was written by members of the Thesis and Dissertation Manual Committee for the Prairie View A&M University’s Graduate School to help graduate students and their committee members prepare theses and dissertations. Its purpose is to define uniform standards of style and format and to allow enough flexibility to satisfy the practices of each academic discipline.

Prairie View A&M University (PVAMU) requires a dissertation from all doctoral candidates and a thesis from all thesis option master's candidates. The thesis or dissertation should be presented in a scholarly, well-integrated and properly documented manner and should contain the original work done by the student under the supervision of an advisory committee.

Because Prairie View A&M University is a public institution, the research conducted at PVAMU is ultimately for the benefit of the public. To support this goal, all theses and dissertations are made available through PVAMU’s John B. Coleman Library, and other PVAMU libraries. The availability may be delayed temporarily only for patent/proprietary or publication reasons. PVAMU requires that all theses and dissertations be bound and submitted to the PVAMU Graduate School in print on 25% Rag cotton paper (see Section 6.6 for Thesis and Dissertation Binding Requirements).

1.2  Presentation of the Material

The finished manuscript is to be an independent professional effort. In the thesis or dissertation the student must use American Standard English, show an overall understanding of the literature in the field, and present clearly the method, significance and results of the research. Full documentation and useful tables and/or figures are especially important. The thesis or dissertation length can vary widely depending on the research topic, academic discipline and the degree sought. There is no specific minimum or maximum length.

1.3  Selecting and Using a Journal Model or Publication Manual

The student may select a journal or publication manual as a style guide in writing the thesis or dissertation. If a journal is selected, it must be respected and well known in the major field. The journal should be listed on the first page of the text (see Appendix A for sample Introduction page). In addition, a copy of a recent journal article must be submitted with the draft thesis or dissertation document for review by the Graduate School.

The document should be prepared to follow the model journal or publication manual for:

- Location of table titles and format (above or below table)
- Location of figure titles and format (above or below figure)
- Format and content of the Reference section
- Text mention of reference citations
Chapter 2  Thesis/Dissertation Content

2.1 Main Body of the Thesis/Dissertation

The thesis or dissertation is an original research project that is expected to contribute to the base of knowledge for the respective field. The thesis or dissertation should be presented as a single unit, and continuity from chapter to chapter or section to section is important. Several studies or experiments may be presented in separate chapters or sections. The thesis or dissertation must have only one Abstract and one Reference section. The Reference section must be an integrated list, not a series of lists. The one inclusive Abstract and the Introduction, Conclusion and Reference sections provide continuity in the document.

Normally, a thesis or dissertation is an empirically-driven investigation of a substantive issue in the field. It is usually composed of five (5) chapters. There are instances in which more than five chapters may be appropriate and the student, in consultation, with his or her Chair should determine the best mode, given the topic and the analytical approach. The main body of the thesis or dissertation may be as follows:

Chapter I: Introduction
Chapter II: Literature Review
Chapter III: Methods
Chapter IV: Results
Chapter V: Conclusions and Future Work
References
Appendices
Vita

The following serves as general guideline for the minimum requirements of what should be included in each chapter:

2.2 Chapter I: Introduction

This chapter describes the rationale, purpose, and scope of the research. Topics often addressed in this chapter include: Problem Statement, Background to the Problem, Research Objectives, Statement of Purpose, Rationale (or Significance) of the Study, and a brief summary of the overall study.

2.3 Chapter II: Literature Review

Review of earlier and current work (empirical or otherwise) that is pertinent to the thesis/dissertation topic. Emphasis should be placed on pertinent findings, relevant methodological issues, and major conclusions. Establishing continuity between earlier works and the current thesis/dissertation is a must. Consensus areas as well as those areas of disagreements in the literature should be addressed.

2.4 Chapter III: Methods

This chapter includes experiment design, analytical techniques/methods, data collection, participants/subjects, procedure, data/statistical analysis, limitations, etc.
2.5 Chapter IV: Results
Data (quantitative and/or qualitative) is presented along with a detailed analysis of the data, description and discussion of the findings to the problems and questions posed on previous chapters. Inferences and specific summary statements are included in the discussion.

2.6 Chapter V: Conclusions and Future Work
General or specific conclusions are drawn on the study. You articulate the meaning, implications and limitations of your findings, and possible future work.

2.7 References
The selected journal model dictates the style and format for references, and citation to references. The “References” section contains the entire source materials referred to in the body of the document.

2.8 Appendices
One or more appendices may be included which contain such documents as: an approval letter from the Internal Review Board (IRB), data approval, copyright approvals, copies of survey instruments, etc.
Chapter 3  Graduate Thesis or Dissertation Committee

3.1 Committee Composition: Thesis and Dissertation
The Thesis Committee consists of at least three graduate faculty members, and at least two should come from the department or program granting the degree. The Doctoral (Dissertation) Committee consists of at least four graduate faculty members, and at least three should come from the department granting the degree. Some doctoral programs might require more than four graduate faculty members. Students must consult the department head of their discipline to find out the minimum number of graduate faculty for a doctoral dissertation committee in their major field. Sometimes it is also helpful to have at least one committee member from outside of Prairie View A&M University.

3.2 Committee Selection
The members of the committee are normally chosen for their expertise in the proposed topic or for expertise in a particular methodology. Thesis and dissertation committee members are chosen among faculty awarded graduate faculty status by the PVAMU Graduate School. A list of graduate faculty members from other departments across campus can be requested from the Graduate School. All voting members of the committee must have been granted graduate faculty status. Other members, such as those with expertise contributing to the candidate’s research, perspective, and/or analyses, may participate as guests as the research progresses and if invited, may join the committee during the defense but will not be a voting member of the official committee.

3.3 Choosing a Thesis or Dissertation Committee
Students may choose a thesis or dissertation chair. The student and the chair will choose other committee members, with approval from appropriate University officials.

3.4 Committee Approval
A committee membership form should have the appropriate signature from the administrators in the college/school granting the degree. The Dean of the Graduate School has final authority for the approval of members of thesis/dissertation committees.

If a student is unable to assemble a complete committee, the department head shall appoint members as needed from the faculty in the student’s department/college, or aid the student in contacting appropriate faculty from other departments.

The thesis or dissertation committee may be reconstituted at the student’s discretion. The student should consult first with the chair of the Thesis/Dissertation Committee and then with the department head about such changes as soon as possible, and forward a new letter requesting approval of the new committee. Committee members should not be changed any more than two times during the process, unless in the case of the unavailability of faculty. Students are cautioned, however, that changes in committee membership may result in changes to the thesis or dissertation with a corresponding extension of the completion of their thesis or dissertation.
Faculty members may also elect to withdraw from a committee. In the event that the chair of the Dissertation Committee is the department head, the student and the department head should meet with the Dean of the College who shall serve as arbitrator.

After selecting a committee, the student should consult with the thesis or dissertation chair and determine the process to be followed in completing the thesis or dissertation. The Graduate School should also be consulted to determine the currently-approved format. Other formal requirements may include an oral defense of the prospectus/dissertation proposal, an oral defense of the thesis or dissertation, and any guidelines, requirements, or recommendations provided by the college or department conferring the degree and PVAMU’s Graduate School.

In addition to the members selected on the students committee (departments/colleges prerogative), the graduate school may appoint an independent outside graduate faculty member to act on the committee, with the main purpose of ensuring fairness of the process.

3.5 Role of the Thesis or Dissertation Committee Chair

The thesis or dissertation committee chair has primary responsibility for supervising the thesis or dissertation process. All questions regarding the topic, form and format, and specific procedures should first be discussed with the chair. While there are general requirements concerning prospectus/dissertation proposal defense, thesis or dissertation formatting, and thesis or dissertation defense, all other decisions are likely to fall within the purview of the chair. All questions should first be discussed with the chair, who will determine which direction the thesis or dissertation will take. The chair and the student have the responsibility of following the guidelines described in this handbook.

The chair also has the role of assisting the student during the writing process. This includes, but is not limited to, assisting in the conceptualization of the general project, the study design, project implementation, issues that may arise during the analysis, and conclusions to be drawn. Other committee members also are expected to make contributions in these areas. It is not within the chair or committee members’ purview, however, to write the dissertation (or any portion of it) for the student.

Finally, the chair acts as a mediator. In the event of differences in opinion between committee members and/or the student, the chair determines which direction the thesis or dissertation shall take. In all instances, it is the chair who acts as the final arbiter and decision-maker.

3.6 Role of the Thesis or Dissertation Committee Members

All thesis or dissertation committee members must have expertise directly related to the proposed thesis or dissertation research topic, except for graduate appointees to the committee. They must also have a reasonable degree of currency and activity in the field, and have been granted graduate faculty status, as specified by Graduate Faculty Guidelines by the PVAMU Graduate School. The chair of the thesis or dissertation committee is responsible for discussing and consulting with the department head about any committee members who are from outside of Prairie View A&M University.
3.7 Committee Members from Outside of Prairie View A&M University

In the event that a committee member from outside the university has been approved (such as having recognized national expertise in the subject, among other criteria), that individual must have graduate faculty status at his or her employing university and/or have been given graduate faculty status at PVAMU.
Chapter 4  Publication of the Research and Copyright Issues

4.1 Publication Scenarios
It is the student’s responsibility to be aware of and adhere to U.S. copyright laws regarding the thesis or dissertation and its contents. The student should be aware of the following scenarios:

4.2 Publication of Thesis or Dissertation Material before being Submitted
The PVAMU policy is that graduate students may publish material that will later be used as part of the thesis or dissertation. However, students must be aware of the agreement signed when a journal accepts an article for publication. The John B. Coleman Library and other PVAMU libraries make all manuscripts available to the public in the Special Collections and Archives department. Do not sign any publication agreement that limits the University’s rights to provide research results to the public.

4.3 The Student’s Already Published Material is used in the Thesis or Dissertation
Students should be aware of the publishing agreement signed when a journal accepts an article for publication. At that time, the student/lead author typically transfers copyright to the journal as publisher, and the author may no longer possess the right to use the material without the copyright holder’s permission. However, the publishing agreement form can be modified before it is signed so that the author retains the right to include the material in the thesis or dissertation. The publisher would still have the rights it needs to print, distribute, and sell the work. When negotiating with the publisher, remember to inform them that the thesis or dissertation will be available worldwide through the Internet.

If you have not retained the right to use your previously published material in the thesis or dissertation, you must get permission from the copyright holder to include it. A written statement of permission (email is accepted) should be provided to the PVAMU Graduate School. Information about obtaining permission is available through PVAMU’s Graduate School.

If the journal retains the right to an article and does not allow its exact reproduction in the thesis or dissertation, it is recommended that the student should contact the journal editor to ascertain whether a revised or reworded chapter is acceptable. The student should not commit auto-plagiarism.

Regardless of which rights a student has retained, the PVAMU Graduate School will require written documentation as evidence you have appropriate rights to include the pre-published material in your thesis. This evidence might be a copy of the publication agreement, website documentation about author retained rights, emails or other forms of written permission from the publisher.

4.4 Future Publication of Thesis or Dissertation Material or Research
Students who plan to publish thesis or dissertation material in future articles need to investigate whether the journal of choice will publish material already made available to the
public and consider this when choosing an option for making the thesis or dissertation available after graduation. Students have the option to restrict full-text access to your thesis or dissertation for a period of time before releasing it to the Internet to allow time to publish in journals whose policy is to be first publisher. Check with the PVAMU Graduate School for allowable restriction periods.

4.5 Including Others’ Copyrighted Material in the Thesis or Dissertation

If the manuscript contains any material (figures, tables, text, etc.) taken from copyrighted sources, the student has the responsibility to determine if permission from the copyright holder is needed. The student should consider a number of factors when utilizing material from other sources, including whether or not the material is in the public domain or can be used under the provisions of Fair Use. Regardless of whether or not permission is required, proper credit must be given in the text.

To summarize, if using published material:

- Determine if the material is copyrighted or not. Non-copyrighted material may be reused freely, as long as credit is given to the original source.

- If the material is copyrighted, determine if it may be included in the student’s thesis or dissertation under the provisions of Fair Use. If Fair Use applies, do not seek permission.

- If Fair Use does not apply, obtain permission (in either the publisher agreement or in a letter or email from the copyright holder).

- Give proper acknowledgment of all work created by others and included in the thesis or dissertation. Provide the PVAMU Graduate School with a copy of any permission letters or email (or the publisher agreement form).

4.6 Registering Copyright

Putting a copyright notice on your thesis or dissertation manuscript automatically protects it under U.S. copyright law as soon as the work is created in a fixed form. Master’s and doctoral candidates may wish to take additional steps to register their copyright through the U.S. Copyright Office. Information is available at [http://copyright.gov](http://copyright.gov). Although it is not required, there are benefits to registering your copyright, including additional legal remedies if you face copyright infringement.

4.7 The Optional Copyright Page

Students may include a copyright page, which includes the title of the document, student name, year of graduation and a copyright notice in the proper form. The copyright notice must include three elements: the copyright symbol © or the word “Copyright” the year of publication; and the name of the copyright owner. For example, a thesis or dissertation submitted in Fall 2011 would carry a notice such as “Copyright 2011 [Student’s Name].”

The copyright notice indicates that the student owns copyright to the thesis or dissertation as an original work of authorship. It may be included regardless of whether the student has
officially registered copyright with the U.S. Copyright Office and regardless of whether portions of the document are copyrighted by others.

Although this page is optional, it is good practice to include it in the thesis or dissertation because it informs the public that the work is protected by copyright, identifies the student as copyright holder, and shows the year of original publication.

Additionally, students may wish to include a Creative Commons license in the same location as the copyright notice. The Creative Commons licenses allow the author to retain copyright, while authorizing specific uses of the work to others, such as downloading, printing, or sharing with a colleague. More information about the Creative Commons licenses can be found at http://creativecommons.org.

For additional information, contact the PVAMU Graduate School if you have questions about the optional copyright page or any copyright issue relating to theses and dissertations.
Chapter 5  Organizing and Formatting the Manuscript

5.1 Thesis or Dissertation Content Organization
The following list gives the contents in the proper order of presentation. All sections marked with an asterisk (*) MUST be included in the manuscript.

<table>
<thead>
<tr>
<th>Preliminary Pages (with Roman numeral page numbers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Title Page</td>
</tr>
<tr>
<td>* Approval Page</td>
</tr>
<tr>
<td>* Abstract</td>
</tr>
<tr>
<td>Copyright Page</td>
</tr>
<tr>
<td>Dedication</td>
</tr>
<tr>
<td>Acknowledgments</td>
</tr>
<tr>
<td>* Table of Contents (Chapter or Section method)</td>
</tr>
<tr>
<td>* List of Figures (if there are two or more figures in text)</td>
</tr>
<tr>
<td>* List of Tables (if there are two or more tables in text)</td>
</tr>
<tr>
<td>* Introduction (as first chapter or section)</td>
</tr>
<tr>
<td>* Main body of text divided into various chapters or sections</td>
</tr>
<tr>
<td>* Summary (or Conclusions and Future Work)</td>
</tr>
<tr>
<td>* Reference section</td>
</tr>
<tr>
<td>Appendices material</td>
</tr>
<tr>
<td>* Vita (one page maximum)</td>
</tr>
</tbody>
</table>

5.2 Prairie View A&M University Format Requirements
5.2.1 Paper Requirement

• Standard 20-pound weight, 25 percent rag or cotton, 8 ½” x 11” paper is required for the thesis or dissertation.

5.2.2 Font Size

• In general, font size should be 10 points minimum, and 12 points maximum, with 12 points preferred. One font size should be used consistently throughout the thesis or dissertation. Therefore text, page numbers, table numbers, figure numbers, references, captions, and footnotes should be in the same font size.

5.2.3 Standard Margin Settings

• Standard margin settings are 1.5” left (to allow for binding), 1.25” top & bottom and 1.0” right

• All writing (text, tables, figures, Appendices, etc.) must be placed within the margins—with the exception of the page numbers, which are located in the top right corner of the header outside the margins.
• Text may be justified depending on the chosen journal style (left justification is typical).

• Tables and figures, including headings and captions, must conform to margin requirements.

5.2.4 Vertical Line Spacing

Double line spacing of the text is required. Subheadings more than one line in length must have the same vertical spacing as text between the lines (i.e., not single-line spaced).

5.2.5 Page Numbers

• All theses or dissertation pages containing text, figures or tables are numbered, except for the title page, copyright and approval page. Page numbers must be placed on each manuscript page.

• Preliminary pages are numbered at the bottom center of the page in lower case Roman numerals (viz., “i,” “ii,” etc.). The abstract is the first numbered page (with page iii).

• The title page is the first numbered page, but the numeral "i" does not appear on the title page. The approval page is numbered "ii (which also does not appear)."

• Text and all reference pages, including appendices and vita, are numbered consecutively in Arabic numerals beginning with the first page of text numbered 1.

• Text pages beginning each chapter should have page numbers placed at the top right header outside the margins in the same font and size as the text (12 point preferred).

• The Vita is the last numbered page. The Vita is limited to one page.

5.2.6 Title Page

• The title page must include the full, official title of the thesis or dissertation, your full name as it appears in Prairie View A&M University records, the full title of the degree awarded and the date the degree is to be awarded. Specific examples of the title page are in the Appendix A. Degree titles for master's candidates are listed under "Degrees Offered" in the Graduate School Catalog.

• The degree title for all doctoral candidates is "Doctor of Philosophy." The date shown on the title page is the month (usually May, August, or December) and year the degree is to be awarded.

5.2.7 Abstract
An abstract is required for all theses and dissertations. The abstract is the first numbered page with Roman numerals (lower case iii) at the top right corner of the header. See Appendix A for sample Abstract and required format.

The abstract must consist of:

- A title (double spaced with month and year)
- Author’s name (with previously obtained degrees and university)
- Chair of Advisory Committee (name with title, Dr., Prof.)
- Test of the abstract of the thesis or dissertation.

5.2.8 Binding

- Information on binding is provided in Sections 6.6 and 6.7

5.2.9 Figures/Tables

5.2.9.1 Figures/Tables: Text Mention

Each figure and table must be mentioned in the text in order by its number. First text mention of each table or figure must be made at least once in the text prior to its appearance.

Appendix figures and tables do not need to be mentioned in text, and they do not need to be listed unless they are numbered consecutively after text figures and tables.

5.2.9.2 Figures/Tables: Placement in Text

Tables and figures may be included on pages with text, with other figures and tables or on separate pages. If a table or figure is placed on a page with other material, the table or figure should be separated from the text (or other material) by a minimum of a double vertical line spacing above and below.

5.2.9.3 Figures/Tables: Long and Continued

Tables or figures longer than one page have the complete title and the number on the first page only. Subsequent pages have the table or figure number (but not the title) and the word "Continued," plus (for tables) the necessary column headings for ease of reading. The end line of the completed table appears only on the last page of the table.

5.2.9.4 Figures/Tables: Landscape

If the table or figure is placed lengthwise (landscape position), the top of the table or figure must be at the left side (binding) side of the page and facing in the same direction as the figure or table. The page number stays in regular (portrait) position. Do not put text on the same page as a landscaped figure.
5.2.9.5 Figures/Tables: In Appendix

These may be numbered consecutively following the text or they may be numbered with an Appendix designation (A-1, for example) or unnumbered.

They must be included in the List of Figures and List of Tables if they are numbered consecutively from text. (If they are numbered by Appendix designation, including them in the Lists is optional.) Appendix figures/tables do not need to be mentioned in text. If they are mentioned in text, they do not need to be mentioned in order.

5.2.9.6 Figures/Tables: Titles and Numbering

Each table and figure in the text must have a separate number and a unique title. It is recommended that titles be single spaced to further differentiate them from text. Figures and tables are numbered consecutively throughout the text, and each table or figure must be mentioned in order and by number in the text. The chosen numbering style must be used for both figures and tables.

5.2.9.7 Figure/Table Titles: Placement

The journal model dictates the style and format by which figures and tables are labeled. Placement of titles beside figures and tables is not acceptable in a thesis or dissertation.

Consistency is needed in the formatting of table/figure titles--capitalization, boldface, italics, placement, spacing, use of period at end, etc.

5.3 Equations

Equation numbering is optional and may be consecutive (1, 2, 3). No two equations may have the same number unless identical, term for term. The point size and type style of the equation and its number must match text. Placement of equation numbers needs to be consistent throughout the thesis or dissertation (to the right of the equation is preferred).

Students must consult the chair of their thesis committee for guidance as to the equation numbering, placement, and any special format requirements for equations in their thesis or dissertation. In addition the chosen journal model can assist in equation formatting.

5.4 Reference Listings and Text Citation

5.4.1 Consistency in Reference Listings

Each thesis or dissertation must contain a formal reference section and include all the sources used in the body of the text. The reference list will be read word for word by the PVAMU Graduate School for consistency, accuracy, and completeness based upon the model journal chosen (see Section 1.3 for more details). Citation formats must follow the style of the chosen journal model.
• Adequate information must be provided for unpublished material.

• Author or entity, title, and the specific web address for Internet material should also be provided.

5.5 Appendices
Appendices are optional and used for supplementary material. Place the Appendices after the reference section. All appendix pages need to be numbered; page numbers are continued from the last page of the references. All material must be within prescribed margins and be readable in size and legibility.

5.6 Appendix Headings
Appendix headings (Appendix designations and titles) should be all capital letters (and bold if major headings (chapter titles) are bold). Titles more than one line in length must be double spaced, as chapter titles. Appendix designations (Appendix A, for example) are centered. Appendix titles are centered, all capital letters and at least one double space below designation: Appendix A Figures.

Appendix headings/titles may be either on a separate title/cover page before the appendix material or on the top of the first page of each appendix. Be consistent from appendix to appendix.

The appendix designation (Appendix or Appendix A, etc.) is required in the Table of Contents. Appendix titles are optional in the Table of Contents. Appendix subheadings may be listed in the Table of Contents, but only if the titles are listed.

These may be numbered consecutively following the text, or they may be numbered with an appendix designation (A-1, for example). If numbered consecutively from the text, they must be included in the List of Tables or List of Figures. Appendix material may be reduced, but must conform to minimum size and legibility requirements. Material may be single spaced.

Chapter 6 Thesis or Dissertation Submittal and Review
6.1 Committee Review and Approval of the Thesis or Dissertation
After the student has passed the final defense and the committee has approved the written thesis or dissertation, the committee and department head signs the Thesis or Dissertation Approval Form. The student delivers the signed original form to the PVAMU Graduate School. Each Chair, Co-Chair and committee member (all voting committee members) must sign the approval form and may not use designee. There are no exceptions.

All committee members and the Dean of Graduate School must approve the thesis or dissertation before it can be bound. However, if a committee member is willing but unavailable to sign at the time of submittal, the student may obtain an absentee committee member form from the PVAMU Graduate School and have it signed by the chair or the department head and the student. The absent member’s signature will be needed on the original approval form before the student’s final clearance.

All of these signatures are needed before the PVAMU Graduate School can accept a manuscript for review. Any student who is having trouble obtaining signatures should contact the PVAMU Graduate School for guidance.

6.2 Availability of the Thesis or Dissertation to the Public
After the student has graduated, the thesis or dissertation will be available in print in the John B. Coleman Library’s Special Collections and Archives Department. All theses and dissertations will eventually be available to the public. At the time of submittal, the student has the option to release the document immediately, have it held for a limited period of time, or have it held for a longer period to protect certain patent or proprietary issues. Except in cases of patent or proprietary holds, information about the work (title, author, abstract, etc.) will be made available to the public during the restriction period.

6.3 Overview of the Correction and Review Process
- Please note that the thesis or dissertation chair or members of the committee may ask the student to attend a pre-submittal conference.
- Review and make any requested corrections to the thesis or dissertation to ensure that it complies with PVAMU’s or the department’s stylistic requirements as to proper formatting, headings, pagination, correct and complete references, appendices, tables, and the like.
- After the manuscript has been reviewed, make any other requested corrections or changes to the original thesis or dissertation as required by the committee or the PVAMU Graduate School.
- Successfully defend your research.
- Make corrections to the thesis/dissertation document based on the recommendations from Committee members and appropriate University officials.
• Obtain appropriate signatures on the approval form: committee chair and members, head of department, Dean, and Graduate School. Use the thesis or dissertation routing form that can be found in Appendix A.

• Hand delivers the original Signed Approval Form to the PVAMU Graduate School.

• The PVAMU Graduate School will review the document again and, if any further corrections are required, the correction process will be repeated.

• After the graduate school approves the manuscript, the student can bind the thesis/dissertation document.

6.4 Overview of the Submittal Process
Once approved, distribute the required number of bound, printed copies of the approved thesis or dissertation to the PVAMU Graduate School.

6.5 PV Graduate School Corrections and Deadlines
The University requirement is that all students will meet graduation requirements prior to participating in commencement exercises.

The graduate thesis and dissertation must be prepared in a style and format that is prescribed by the Graduate School. **No later than two weeks prior to the last day of classes for the term or semester** the student must submit a final draft of the thesis, dissertation or project report to the graduate school for approval.

All corrections must be made promptly and meet the deadlines in the PVAMU Graduate School calendar. To graduate in a given semester, students must meet the scheduled deadline for submittal of (1) the signed approval form and (2) the binding and submittal of the thesis or dissertation in final form. **There are no exceptions for late submittal.**

**The bound copies of the signed thesis and dissertation must be submitted to the graduate school on or before the last day of classes.**

Students submitting after the deadline cannot graduate until the following semester. Graduation will be postponed if corrections are not made on time. Please keep in mind that the Title, Approval and Abstract pages must be changed to reflect the correct date of graduation in the event of a graduation postponement.

6.6 PVAMU Thesis or Dissertation Binding Requirements
<table>
<thead>
<tr>
<th>Paper</th>
<th>25% Rag</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Copies</td>
<td>Minimum of six (6) bound copies</td>
</tr>
<tr>
<td></td>
<td>1 for Thesis/Dissertation Chair</td>
</tr>
<tr>
<td></td>
<td>1 for the Department</td>
</tr>
<tr>
<td></td>
<td>1 for College</td>
</tr>
<tr>
<td></td>
<td>1 for PVAMU Graduate School</td>
</tr>
<tr>
<td></td>
<td>1 for John B. Coleman Library</td>
</tr>
<tr>
<td></td>
<td>1 for Student</td>
</tr>
<tr>
<td>Covers</td>
<td>Hardbound Cover (hard back)</td>
</tr>
<tr>
<td></td>
<td>• Color: Black – Masters</td>
</tr>
<tr>
<td></td>
<td>• Color: Black – Doctoral</td>
</tr>
<tr>
<td>Lettering</td>
<td>Color of Lettering (outside of cover) Spine and front cover</td>
</tr>
<tr>
<td></td>
<td>• Gold Foil</td>
</tr>
<tr>
<td></td>
<td>• PVAMU seal on front cover (Gold Foil)</td>
</tr>
</tbody>
</table>

Fabric cover hard case binding is required. The colors of the binders are: (i) Black (Master’s – MS) and (ii) Black (Doctoral – Ph.D.).

**6.7 Spine Example**

(i) Spine (Doctoral): Hardbound – Black, and (ii) Spine (Master’s): Hardbound - Black

<table>
<thead>
<tr>
<th>AUTHOR’S NAME</th>
<th>Ph.D.</th>
<th>YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AUTHOR’S NAME</th>
<th>M.S.</th>
<th>YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Chapter 7  Writing the Preliminary Pages

7.1  Sample Title Page

Samples of preliminary pages are located in Appendix A. Explicit instructions are given for the formatting of these pages:

- Title and thesis or dissertation statement;
- Dissertation or thesis author statement
- Submittal statement
- Type of degree
- Month and year of graduation
- Major subject

7.2  Approval Page

Only one signature page is allowed in the document, and it must follow the format of that given in Appendix A. All committee members must sign this page of the completed and accepted document.

7.2.1  General Format

- Match font and point size to Title Page
- Do not bold on this page; exception, title is bold if major headings are bold
- Do not include page number on this page

7.2.2  Title of Thesis or Dissertation

- Same wording as on Title Page. All capital letters, centered. (Exception: genus, species, chemical element symbols should be upper and lower case and in italics as needed to comply with the practice of the discipline).
- Double space if more than one line; no period at the end of the title.

7.2.3  Thesis or Dissertation Author Statement

- Capitalize “A” and also the “T” in Thesis or “D” in Dissertation.
- Use double vertical line spacing.
- Student's name in all capital letters, same wording as the Title Page.

7.2.4  Submittal Statement

- Single vertical line spacing
- Same wording as on Title Page
- Double space between submittal statement and degree
• Degree is in all capital letters; must match wording on Title Page

7.2.5 Committee Member Names and Positions

• If Co-chairs, put Co-chairs of Committee (instead of Chair) before first Co-chair's name. If the department head serves as a member, Chair or Co-chair, his/her name must be included for both positions.
• Intercollegiate degrees must include the name of the Chair of the specific faculty (e.g., Intercollegiate Faculty Chair, Mary Williams). This name is listed in place of the head of department’s name.
• No titles should be associated with the names on this page.

7.2.6 Date

• Month and year of graduation. (Graduation dates at Prairie View A&M are generally May, August or December — do not use the final defense or submittal month).
• No comma between the month and year.

7.2.7 Major Subject

• Must agree with major subject listed in the official university records
• Use upper and lower case letters.

7.3 Abstract

7.3.1 General Format

This is the first numbered thesis or dissertation page – usually lower case Roman numeral “iii.” No bold on this page (exception: the “Abstract” heading is bolded if major headings are bold). Numbering must be located in the bottom center of the page. Please see sample Abstract in Appendix A for formatting requirements.

7.3.2 Preliminary Lines

• Begin two double vertical spaces below major heading “Abstract.”
• Consistently space all lines the same as text -- except use one single line spacing between Co-chairs, if applicable.
• Title of the thesis or dissertation appears in upper and lower case letters (title case) with a period at the end of the title.
• Wording must match the title on Title and Approval page
• Date of graduation is in parentheses (no comma between month and year).
• Student's name must be the same as on first two pages, but in upper and lower case letters.

• A comma is placed after the student’s name and after the degree abbreviations.

• The previous degree is abbreviated, followed by a comma, followed by the college or university.

• Use a semicolon to separate previous degrees if you have received more than one.

• Do not include the degree you are receiving.

• Use “Dr.” before chair's name.

• For Co-chairs: Use single line spacing between Co-chairs' names and align one directly under the other as follows:

  Co-Chairs of Advisory Committee: Dr. Michael L. Smith
  Dr. Julia S. Wilson

7.3.3 Abstract Text

• Begins two double spaces below preliminary lines.

• Length of text: Include 350 words or less.

• Vertical spacing (double line spacing), paragraph style, and margins are the same as used in text.

7.4 Copyright Page

• Optional page—follows the title page (no page number); not counted in page numbering.

• Includes the thesis or dissertation title (in title case) on first line and the student name and year on the second line—all lines double spaced.

• Is in same type size and style as text (no bolding on this page).

• If listing preliminary pages in the Table of Contents, include Copyright.

7.5 Dedication

• Optional page—follows the Abstract.

• If listing preliminary pages in Table of Contents, include Dedication.

• Heading is in bold font if major headings are bolded.

• Limited to one page.

• Is in same type size and style as text.
Acknowledgments

- Optional--Limited to four pages.
- Follows the Dedication Page (or Abstract, if no Dedication).
- If listing preliminary pages in the Table of Contents, include Acknowledgments.
- Heading (Acknowledgments) is in bold font if major headings are bolded.
- Is in same type size and style as text

Optional Preliminary Pages

7.7.1 Dedication
To my Mother

7.7.2 Copyright
Full Title of Thesis
Copyright 20XX Sarah Anderson Smiley

7.7.3 Acknowledgments

I would like to thank my committee chair, Dr. Smith, and my committee members, Dr. Jones, Dr. Morton, Dr. Anderson, and Prof. Benner for their guidance and support throughout the course of this research.

Thanks also to my friends and colleagues and the department faculty and staff for making my time at Prairie View A&M University a great experience. I also want to extend my gratitude to the National Education Foundation, which provided the survey instrument, and to all the Texas elementary teachers and students who were willing to participate in the study.

Table of Contents

Either the Chapter format or the Section format can be chosen by the student for writing a thesis or dissertation (see Appendix A).

7.8.1 General Format

- Do not bold on this page (exception: The heading “Table of Contents” is bolded if major headings are in bold font).
- No italics on this page (except for Latin terms, titles of works, etc.).
- Put the word “Page” above page number column.
- Put leader dots between title listings and page numbers.
- Double space all major headings.
- Single space all subheadings.
- If the table of contents is more than one page, add appropriate headings at the top of page (for example: add “Page” above the page number column).
7.8.2 Content

- The Table of Contents must contain the major headings and the first level subheadings; subordination of subheadings should be indicated by indentation.
- Lower levels of subheadings are optional in the Table of Contents.
- Major headings are in upper and lower case letters, but not in bold font.
- Subheadings are in upper and lower case.
- If preliminary pages are included in the Table of Contents, begin with the Abstract and include all preliminary pages.
- Check for consistent spelling of “Acknowledgments” against the spelling on the “Acknowledgments” page.
- The first major chapter title in text contains the word “Introduction.”
- The last major chapter/section title in text contains the word “Conclusions and Future Work”.
- Must show a “References” section, Appendices (if applicable) and Vita.

7.8.3 Consistency

- Check against text for agreement of page numbers, levels and styles of major headings and subheadings and the wording of major headings and subheadings (levels of subheadings are shown by indentation).
- Check for consistency of capitalization.
- Check that the wording of an Appendix listing matches exactly what is in text.

7.9 Vita (See Appendix A for Sample Vita)

- The vita is the last page of the thesis or dissertation and is (preferably) limited to one page.
- The font (including style and size) needs to be the same as the text.
- Use either paragraph style (with same spacing as text, list), or resume style. The heading “Vita” is bold if major headings are bold.
- The vita must include your name, and educational background. Because the thesis or dissertation will be available to the public and there are increasing privacy concerns, it is recommended that the student not include personal information such as date of birth, parents’ names, and personal address in the vita.
- Wording of the name needs to agree with the name on the first three pages of thesis or dissertation.
- Need educational background for all previous degrees, bachelor’s level and above. Include the degree, major subject, university and date of graduation.
- Other information is optional: professional experience, publications, business or academic information.
- Name of the typist may be stated at the bottom of the page. Example: The typist for this thesis was Ms. Mary Jones. Use only if a typist or editor prepared the document.
7.10 Thesis and Dissertation Routing Sheet

After a student has successfully completed the defense of his/her dissertation a copy of the manuscript must be submitted to the graduate school for review and final approval. The respective document must be accompanied by a routing form (Graduate School Theses and Dissertation Route Sheets) with all required signatures. Please see Appendix A for a copy of the respective form.
Appendix A: Required Page Formatting Samples with Accompanying Instructions
SURFACE CHEMISTRY OF THE OXIDATION MECHANISMS ON PYRITE AND MINERAL INOCULATED WITH CHEMOLITHOTROPHIC BACTERIA: AN X-RAY PHOTOELECTRON SPECTROSCOPY (XPS) STUDY.

A Thesis
by
MANKATA INKUMSAH

Submitted to the Office of Graduate Studies of Prairie View A&M University in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY (MASTER OF SCIENCE)

December 20XX

Major Subject: Chemistry
SURFACE CHEMISTRY OF THE OXIDATION MECHANISMS ON PYRITE AND MINERAL INOCULATED WITH CHEMOLITHOTROPHIC BACTERIA: AN X-RAY PHOTOELECTRON SPECTROSCOPY (XPS) STUDY

A Thesis
by
MANKATA INKUMSAH

Submitted to the Office of Graduate Studies of Prairie View A&M University in partial fulfillment of the requirements for the degree of DOCTOR OF PHILOSOPHY (MASTER OF SCIENCE)

Approved as to style and content by:

__________________________________________  _______________________________________
Name  Name
(Chair of Committee)  (Member)

__________________________________________  _______________________________________
Name  Name
(Member)  (Head of Department)

__________________________________________  _______________________________________
Name  Willie F. Trotty
(Dean of College)  (Dean of Graduate School)

December 20XX

Major Subject: Chemistry
Surface Chemistry of the Oxidation Mechanisms on Pyrite and Mineral Inoculated with Chemolithotrophic Bacteria: An X-ray Photoelectron Spectroscopy (XPS) Study. (December 2006)

Mankata Inkumsah, B.S., Prairie View A&M University; M.S., Somewhere University (If holding a previous degree)
Chair of Advisory Committee: Dr. Hylton G. McWhinney

The mining of coal and base metal deposits exposes large quantities of sulfide bearing rocks and produces mine waste rocks and tailings rich in sulfide minerals. The seepage of oxygenated water through the waste rocks generates acidic fluids rich in leached metals from the minerals in the rocks. The acidic nature and the metals in this liquid can cause severe ecological damage when entering streams and ground water. Acid mine drainage is a result of the weathering and oxidation of mineral sulfide-bearing rocks such as sphalerite and the pyrite, the most common of which is pyrite. Certain chemolithotrophic bacteria inhabit ore-bearing rocks exposed to the atmosphere and obtain all of their energy for growth from the dissolution and oxidation of the minerals within the ore body. This bacterial activity is harmful to the environment since sulfuric acid is a major end product when sulfide bearing minerals are oxidized by the lithotrophic bacteria.
SAMPLES OF OPTIONAL PRELIMINARY PAGES

DEDICATION

(Optional)

1. All caps heading
2. Limit to 1 page only
3. Numbered (iv)
ACKNOWLEDGEMENTS

(Optional)

1. All caps heading
2. Limit to 1 page only
3. Numbered (v)
SAMPLES OF OPTIONAL PRELIMINARY PAGES

NOMENCLATURE

(OR LIST OF SYMBOLS OR LIST OF ABBREVIATIONS OR LIST OF ACRONYMS)

(Optional)

PVAMU Prairie View A&M University

1. All caps heading
2. Numbered (vi)
## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>iii</td>
</tr>
<tr>
<td>DEDICATION</td>
<td>v</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>vi</td>
</tr>
<tr>
<td>TABLE OF CONTENTS</td>
<td>vii</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>x</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>xii</td>
</tr>
<tr>
<td>CHAPTER I</td>
<td>1</td>
</tr>
<tr>
<td>INTRODUCTION</td>
<td></td>
</tr>
<tr>
<td>CHAPTER II</td>
<td>6</td>
</tr>
<tr>
<td>LITERATURE REVIEW</td>
<td></td>
</tr>
<tr>
<td>Acid Mine Problems</td>
<td>6</td>
</tr>
<tr>
<td>Sources</td>
<td>8</td>
</tr>
<tr>
<td>Pyrite</td>
<td>10</td>
</tr>
<tr>
<td>Marcasite</td>
<td>11</td>
</tr>
<tr>
<td>Galena</td>
<td>12</td>
</tr>
<tr>
<td>Pyrite Structure and Mechanism of Mineral Oxidation</td>
<td>13</td>
</tr>
<tr>
<td>CHAPTER III</td>
<td>16</td>
</tr>
<tr>
<td>METHODOLOGY</td>
<td></td>
</tr>
<tr>
<td>CHAPTER IV</td>
<td>42</td>
</tr>
<tr>
<td>RESULTS AND DISCUSSIONS</td>
<td></td>
</tr>
<tr>
<td>CHAPTER V</td>
<td>81</td>
</tr>
<tr>
<td>CONCLUSIONS</td>
<td></td>
</tr>
<tr>
<td>REFERENCES</td>
<td>82</td>
</tr>
<tr>
<td>APPENDICES</td>
<td>85</td>
</tr>
<tr>
<td>VITA</td>
<td>88</td>
</tr>
</tbody>
</table>

Copyright Permissions for FIGURES and TABLES
# TABLE OF CONTENTS

1. **ABSTRACT** .................................................................................................................. iii
2. **DEDICATION** ............................................................................................................... v
3. **ACKNOWLEDGEMENTS** ............................................................................................. vi
4. **TABLE OF CONTENTS** ............................................................................................. vii
5. **LIST OF FIGURES** ........................................................................................................ x
6. **LIST OF TABLES** .......................................................................................................... xii
7. 1. **INTRODUCTION** ...................................................................................................... 1
8. 2. **LITERATURE REVIEW** ............................................................................................ 6
   2.1 Acid Mine Problems ..................................................................................................... 6
   2.2 Sources ......................................................................................................................... 8
      2.2.1 Pyrite ..................................................................................................................... 10
      2.2.2 Marcasite ............................................................................................................. 11
      2.2.3 Galena .................................................................................................................. 12
   2.3 Pyrite Structure and **Mechanism of Mineral Oxidation** ........................................... 13
8. 3. **METHODOLOGY** ..................................................................................................... 16
9. 4. **RESULTS AND DISCUSSIONS** .............................................................................. 42
10. 5. **CONCLUSIONS** ...................................................................................................... 81
11. **REFERENCES** ............................................................................................................. 82
12. **APPENDICES** ............................................................................................................ 85
13. **VITA** .......................................................................................................................... 88

Copyright Permissions for FIGURES and TABLES
LIST OF FIGURES

1. XPS spectra of carbon 1s region for crushes treated pyrite…………………. 44
2. XPS spectra of oxygen 1s region on crushed treated pyrite…………………. 45
3. XPS spectra of zinc 3p region showing 3p1/2 at ~ 1022 eV of the sterile pyrite while no evidence for the Zn is available for the bacteria treated specimens………………………………………………………………………… 46
4. XPS spectra of sulfur 2p region for bacteria treated crushed samples……… 48
5. XPS spectra of iron 2p region showing the different iron species detected as a function of treatment …………………………………………………………… 49
6. XPS spectra showing sulfur 2p and iron 2p region for planar polished pyrite ………………………………………………………………………… 50

1. Double space between figure titles
2. Single space within a figure title entry
3. Both page and Figure columns are wordless
LIST OF TABLES

<table>
<thead>
<tr>
<th>TABLE</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Different bacteria found in sulfide ores and their growth conditions</td>
<td>25</td>
</tr>
<tr>
<td>2. Sulfur surface species on polished pyrite as a function of air exposure time (18° take off angle)</td>
<td>64</td>
</tr>
<tr>
<td>3. Iron surface species on polished pyrite as a function of air exposure time (18° take off angle)</td>
<td>67</td>
</tr>
<tr>
<td>4. Sulfur surface species on polished etched pyrite as a function of air exposure time (18° take off angle)</td>
<td>73</td>
</tr>
<tr>
<td>5. Iron surface species on polished etched pyrite as a function of air exposure time (18° take off angle)</td>
<td>76</td>
</tr>
</tbody>
</table>

1. Double space between figure titles
2. Single space within a figure title entry
3. Both page and Figure columns are wordless
CHAPTER I
INTRODUCTION

Acid mine drainage, also referred to as acid rock drainage, is produced when sulfide minerals are exposed to the atmosphere by mining of base metals and coal. Although the production of acid mine drainage does occur naturally, mining and other human activities promote the generation by increasing the quantity of sulfide exposed (Akcil et. al., 2006). As water from rain or other sources pass through or over the exposed sulfide bearing rocks, acidic fluids, rich in metals, are leached from the minerals in the rocks into the surrounding environment thus contaminating the environment. Deposits of mine tailings also expose sulfide minerals which also produce acid mine drainage. Sources of acid mine drainage include underground and open pit mining works, overburden and waste rocks dumps, flotation tailings dams and concentrated stockpiles (Fortin et al, 1997). Pyrite (FeS$_2$), marcasite (FeS$_2$), chalcopyrite (CuFeS$_2$), chalcocites (Cu$_2$S), sphalerite (ZnS), galena (PbS), millerite (NiS), pyrrhotite, arsenopyrite (FeAsS) and cinnabar (HgS) are all examples of sulfide minerals with the most common being pyrite.

Acid mine drainage or acid rock drainage is produced as a result of weathering and oxidation of sulfide-bearing rocks. The production or accumulations of acid rich fluids have a significant adverse effect on the environment if not checked.

Selected Journal Model Sentence

This thesis (dissertation) follows the style of the *Journal of Surface Science*. 

PAGE 1 SAMPLE OF CHAPTER METHOD

1. This is the first page of the document
2. The page number should be in the upper right header and numbered as page’1’
1. INTRODUCTION

Acid mine drainage, also referred to as acid rock drainage, is produced when sulfide minerals are exposed to the atmosphere by mining of base metals and coal. Although the production of acid mine drainage does occur naturally, mining and other human activities promote the generation by increasing the quantity of sulfide exposed (Akcil et. al., 2006). As water from rain or other sources pass through or over the exposed sulfide bearing rocks, acidic fluids, rich in metals, are leached from the minerals in the rocks into the surrounding environment thus contaminating the environment. Deposits of mine tailings also expose sulfide minerals which also produce acid mine drainage. Sources of acid mine drainage include underground and open pit mining works, overburden and waste rocks dumps, flotation tailings dams and concentrated stockpiles (Fortin et al,1997). Pyrite (FeS$_2$), marcasite (FeS$_2$), chalcopyrite (CuFeS$_2$), chalcocites (Cu$_2$S), sphalerite (ZnS), galena (PbS), millerite (NiS), pyrrhotite, arsenopyrite (FeAsS) and cinnabar (HgS) are all examples of sulfide minerals with the most common being pyrite.

Acid mine drainage or acid rock drainage is produced as a result of weathering and oxidation of sulfide-bearing rocks. The production or accumulations of acid rich fluids have a significant adverse effect on the environment if not checked.

This thesis (dissertation) follows the style of the *Journal of Surface Science*. 
CURRICULUM VITA

EDUCATION

- M.S. Mechanical Engineering, Prairie View A&M University, Prairie View, Texas, 1998
- B.A. Mechanical Engineering, Prairie View A&M University, Prairie View, Texas, 1996

EXPERIENCE

- Company: All- Strength Alloys Inc.
  Position: Cold Process Supervisor, 1999 – Present
  Job: Production of Thin Sheet High Strength Super Alloys

- Company: County-Wide Sanitation Enterprise
  Job: Garbage Incineration

PROFESSIONAL, TECHNICAL AND WORK-RELATED EXPERIENCE AND SKILLS

- Skilled in pyrotechnic application to waste disposal
- Speak Spanish and English Fluently
- Expert in C++ Programming
- Knowledgeable About Process Flow Controllers
- Trained in Analyzer House NIR Process Analysis

PROFESSIONAL ACHIEVEMENTS AND PUBLICATIONS

- Summa Cum Laude Graduate, 1998
- Vice President of Prairie View A&M University Student Government, 1994 -1996
- Prairie View A&M University President Scholar, 1992
- (List any publications if applicable)
### GRADUATE SCHOOL

**THESIS APPROVAL ROUTE SHEET**

Student Name/cell/email: _____________________  ______________  ________________

After the Candidate’s Committee has approved the thesis and revisions have been made but before binding the Thesis, please have your Thesis reviewed by the following:

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advisor</td>
<td></td>
</tr>
<tr>
<td>Committee Member</td>
<td></td>
</tr>
<tr>
<td>Committee Member</td>
<td></td>
</tr>
<tr>
<td>Committee Member</td>
<td></td>
</tr>
<tr>
<td>Committee Member</td>
<td></td>
</tr>
<tr>
<td>Department Head</td>
<td></td>
</tr>
<tr>
<td>Associate Dean (if needed)</td>
<td></td>
</tr>
<tr>
<td>Dean</td>
<td></td>
</tr>
<tr>
<td>Dean of Graduate School</td>
<td></td>
</tr>
</tbody>
</table>
After the Candidate’s Committee has approved the thesis and revisions have been made but before binding the Dissertation, please have your Dissertation reviewed by the following:

Advisor

Date

Committee Member

Date

Committee Member

Date

Committee Member

Date

Committee Member

Date

Department Head

Date

Associate Dean (if needed)

Date

Dean

Date

Dean of Graduate School

Date
Appendix B  Juvenile Justice Dissertation Timeline and Requirements

Typeset and Margins:

Typeface: 12-point type Times Roman or 12-point type Courier. Both Serif, for readability. (Tables=sans serif=visual presentation).

Spacing:

- Double spacing is required throughout most of the manuscript.
- Single-spacing can be used for table titles and headings, figure captions, references (but double spacing is required between references), footnotes and long quotations.
- Long quotations may be indented five spaces or ½ inch.
- References, single spaced, but double spacing is required between references

Pagination:

- Chapters begin on a new page.
- Dissertations do not have running head.
- The position of the page number on each new chapter is centered at the bottom of the page.
- The position of the page number on all other pages in a chapter is placed on the right at the top of the page.
- The position of the page number of on full-page tables and figures may differ from the position of number on other pages.
- Page numbers continue throughout the appendix.

Figures, tables and footnotes:

- Tables on each chapter should be incorporated at the appropriate point in the text, as a convenience to readers.
- Short tables may appear on a page with some text.
- Long tables and each figure is placed on a separate page immediately after the page on which the table or figure is first mentioned.
- Figure captions are typed below the figure or in some cases, on the preceding page or facing page.
- Footnotes to the text are typed at the bottom of the page on which they are referenced.
Preliminary pages:

- Lower case roman numerals.
- Includes: title page, approval page, abstract, acknowledgment page, table of content, list of tables and figures.
- Prepare abstract according to the requirement of Dissertation Abstracts International. About 350 words (student is responsible for consulting on this requirement).

Chapters:

- Titles of each chapter: Introduction, Literature Review, Method, Results, and Discussion.
- Each chapter begins on a new page.
- The position of the page number on each new chapter is centered at the bottom of the page (this page does not have a running head).
- In APA style the introduction (to each chapter) is not labeled. However, the arrangement of pages or sections in most thesis and dissertations may require that the introduction be labeled because no other heading appears on that page.
- Chapters:
  - Introduction
  - Literature Review
  - Method
  - Results
  - Discussion, Summary and Conclusions (Note that the APA Manual states “the abstract is now often substituted for the summary” (pg. 323), This can be interpreted to mean that the abstract is written after the discussion and conclusions, as a result this last chapter should end with a summary of the work. This summary can also be placed in the preliminary section as the abstract.)
### Order of Content: Required

<table>
<thead>
<tr>
<th>Thesis/Dissertation Parts</th>
<th>Numerical Style and Page Assignment</th>
<th>Typing Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Preliminary Pages</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blank sheet of Bond paper</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>1. Title Page</td>
<td>Lower case Roman Numerals (i, ii)</td>
<td>Count, but do not type on page</td>
</tr>
<tr>
<td>2. Approval Signature Sheet</td>
<td></td>
<td>Original signatures must be on acid free paper</td>
</tr>
<tr>
<td>3. Abstract</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Copyright Pages *</td>
<td>Lower case Roman Numerals (iii, iv, v, vi,...)</td>
<td>Type on Page (Bottom Center)</td>
</tr>
<tr>
<td>5. Dedication page *</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Acknowledgments *</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Table of Contents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. List of Tables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. List of Figures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. List of Symbols and/or Abbreviations</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Text</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Body of Thesis/ Dissertation (divided into chapters)</td>
<td>Arabic Numerals (1,2,3,4,...)</td>
<td>Type on Page (Top Right)</td>
</tr>
<tr>
<td>12. Bibliography or List of References</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Appendix * (Include instruments, permits, IRB, etc. here)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Biographical Sketch (limit: one page)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blank Sheet of Bond Paper</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

*Sections marked with an asterisk are optional. **ALL OTHER PARTS ARE REQUIRED.**

**Dissertation/Thesis Defense Timeline for Juvenile Justice**
This list of steps is based on a general time frame and applies to all semesters. Students are responsible for meeting the deadlines posted in the academic calendar.

_The first two weeks of class:_

- Fill out Application for Graduation form (available on university webpage). Follow instructions on this form.

_Eight weeks before the last day of classes:_

- Discuss an oral defense date and time with dissertation/thesis Chair. The student, dissertation/thesis chair and all committee members agree on a date and time. All committee members must agree and approve the document prior to the defense. All must be present for the defense.

_Six weeks before the last day of classes:_

- Submit a manuscript draft of your dissertation/thesis to committee members. Committee members have a minimum of two weeks to review the document. All comments/corrections will be submitted to dissertation/thesis Chair;
- Discuss all corrections/revisions with dissertation/thesis Chair and make all corrections, revisions as recommended by committee members. If necessary, committee members will identify any weaknesses and make suggestions for improving the manuscript.
- All committee members are responsible for the quality for the dissertation/thesis.

_Two weeks before the defense:_

- Make arrangements with your advisor to have the graduate secretary prepare your defense announcement. The graduate secretary will make all the arrangements (announcement to the university community, reserving a room for the defense, preparation of dissertation/thesis defense forms, etc.).
- On the day the public announcement is made, a copy of the manuscript that will be defended will be placed in the student’s file. This manuscript will be available to all those who requests it for review (office review only).

_Four weeks before the last day of classes:_

- Successfully defend your dissertation/thesis; students cannot pass the dissertation/thesis if major revisions are required. Committee members will identify the weaknesses and make suggestions for improving the manuscript. It is the student responsibility to make such corrections and follow advice to be able to pass the defense. Committee members are
expected to keep students from defending documents that do not meet the standards for well-crafted, original research contributing to the knowledge base of juvenile justice.

- Make all revisions recommended by committee, make sure the manuscript meets all APA-style requirements.
- After the defense:
  - If committee requires minor revisions, chair approves final revision.
  - It is the student responsibility to make sure final copy of dissertation/thesis meets APA-style and format.
  - Get binding information. It is the student responsibility to make arrangements and pay for binding, microfiche, and dissertation/thesis copyright.

*Three weeks before graduation:*

- After all corrections are made, and APA-style and formatting issues are addressed, make one copy, as it will be presented for binding;
- The Chair of the Dissertation/thesis, submits the copy to the Dean of the Graduate School for clearance;
- After document is reviewed and accepted by the Graduate School, make 5 copies on the required acid-free paper;
- Submit the approved copies for binding (get instructions from Justice Studies Graduate Secretary);
- After binding, get all signatures;

*Last day of the semester:*

- Graduating students are certified for commencement ceremonies by the Dean of the College on the day specified by the Registrar’s Office. Only those students whose dissertation/thesis has been cleared by the Graduate School Dean will be certified to march at commencement.

**Timeline general information for Juvenile Justice:**

Chair of the Dissertation and students must:

1. Distribute the manuscript among all committee members;
2. Committee members will have a minimum of two weeks to read, comment and suggest changes to the manuscript (from the day they receive it);
3. Chair and student propose two tentative defense dates and members should choose one that is convenient for all. These dates should be suggested when the manuscript is distributed.
4. A copy must be filed in the office for anyone to review.
5. All members must agree that the document is ready for defense. If there are any issues, these should be addressed before the defense day, and should be specified in the comments written on the manuscript.

6. All members must agree to be present on the defense date. All must agree ahead of time so there should be no conflicts.

7. Student and Chair will make sure that all the comments and suggestions made by the members are included on the final draft.

8. Student is responsible for making copies of the manuscript for all members before the defense and after the defense (final draft on file).

9. There should be a two week period between the announcement of the date and the actual defense date.

10. Once a defense date is arranged, the Graduate Secretary will make the announcement and arrangements (assign room, etc.).

11. Before students defend a copy of the manuscript is filed in our office (for public review before the defense and for office records).

12. Students must contact the Graduate Secretary to make sure their student file is completed and in order.

13. After the defense there might be minor changes to make.

14. The committee members or Chair might go over the thesis/dissertation for a final review.

15. Chair delivers manuscript to the Graduate School Dean for clearance.

16. If the Graduate School Dean recommends corrections or revisions, the document will be send back to the student via the Chair.

17. The student is responsible for making all recommended revisions and the Chair certifies to the Graduate School Dean that the corrections have been made.

18. The student gets binding information and instructions from the Department’s Graduate Secretary.

19. Binding and signing of thesis/dissertation takes place only after all corrections, revisions are completed and approved by committee and Graduate School Dean.

20. After all corrections are made, the student prints the document on the required paper, has it bound and gets all required signatures. The dissertation is signed after binding.
Appendix C  Educational Leadership Program

Ph. D. Program Dissertation Information and Processes

Advancement to Candidacy Stage
1. After a student has passed the comprehensive examination and completed the core courses, the student will be advanced to candidacy.

2. The candidate should complete the candidacy form (see appendix of the Ph. D. in Educational Leadership Program Handbook).

Composing the Dissertation Committee Stage
1. After candidacy, develop a dissertation committee commensurate with registration in EDUL 8003. Select a committee chair from among the qualified doctoral faculty within the Department of Educational Leadership and Counseling.

2. In consultation with the committee chair, the student will select three or four other committee members. One of the committee members should be a faculty member from a department outside of the College of Education.

3. Complete the Doctoral/Advisory Committee form and obtain signatures (see appendix of the Ph. D. in Educational Leadership Program Handbook).

Dissertation Proposal Stage
1. Work with the dissertation committee to develop a quality dissertation proposal. The proposal is essentially equivalent to the first three chapters of the dissertation.

2. With the consent of all members of the dissertation committee, the candidate and dissertation committee chair, will schedule a dissertation proposal defense.

3. Upon successful defense of the proposal, the dissertation committee chair will submit a Doctoral Proposal Approval form (see appendix of the Ph. D. in Educational Leadership Program Handbook), a pdf copy of the final proposal, a signed Proposal Title Page (see appendix of the Ph. D. in Educational Leadership Program Handbook), and an abstract, to
the Dean of the Whitlowe R. Green College of Education and Dean of the Graduate School.

**Internal Review Board for the Protection of Human Subjects Processes**

1. Successfully complete the online CITI training offered through the PVAMU Internal Review Board for the Protection of Human Subjects (IRB).

2. Upon completion of the dissertation proposal, submit an Internal Review Board (IRB) application to the Prairie View University’s Office of Research Compliance showing documentation of a successfully defended proposal along with completion of IRB certification. Details of the IRB process can be found online at [http://www.pvamu.edu/pages/3450.asp](http://www.pvamu.edu/pages/3450.asp).

3. IRB Approval must be granted before any collection of data.

**Dissertation Defense Stage**

1. Submit a written dissertation composed of five chapters to the committee members. The chair of the committee must approve the submission of the dissertation to other committee members for review.

2. The committee members should have an opportunity to review the revised dissertation at least two weeks prior to the dissertation defense date.

3. Upon successful review, the committee will approve the dissertation defense date. The student should complete and the committee chair will sign and submit an Application for Dissertation Defense (see appendix of the Ph. D. in Educational Leadership Program, Handbook), along with an abstract, to the Department Head, Dean of the College of Education and the Dean of the Graduate School who will sign the form indicating their approval.

4. The approval application must be submitted to the Dean of the Graduate School at least two weeks before the defense is scheduled.
5. The committee chair will forward the dissertation abstract and invitation to attend the defense to the College of Education Dean’s Office for announcement to faculty and other members of the Prairie View A&M University community.

6. If the defense is successful, the chair will submit the following documents to the Department Head, the Dean of the College of Education and the Dean of the Graduate School: (a) a signed Doctoral Defense Approval Form (b) a dissertation title page, and (c) a draft copy and PDF copy of the completed dissertation adhering to the Graduate School timelines (currently at least two weeks before the university’s last class date). The form and title page samples can be found in the PVAMU Ph. D. in Educational Leadership Program, Handbook Appendix.
Appendix D  English M.A. Thesis Requirements

The MA Thesis Option allows students to prepare a major writing project in an area selected by the student in consultation with faculty. Students demonstrate the ability to conduct advanced academic research and scholarly writing, while receiving guidance from three senior members of the department.

You select a primary advisor to chair your committee who will also supervise your independent study course(s), ENGL 5133: Seminar in Thesis Writing. You then select a second member of your advisory committee; your chair will choose the third. The committee must be approved by the Graduate School using the form obtained from the Department.

As soon as you have an idea of your focus and primary research, complete the form specified by the Department, have all members of your committee sign it, and submit it to the Graduate School.

Your M.A. thesis should be formatted according to the template that starts on the next page. Pay special attention to margins, headers, and footers.

After completion of your thesis, generally between 70-100 pages, you will have an oral thesis defense, generally lasting one to two hours, in which you present an overview of the project and answer any questions posed by the committee. You must use the form obtained from the Department to request permission to schedule this examination, which should be at least three weeks before the last day of classes. You should send copies of your thesis to all members of your committee one week before your scheduled defense.

Upon successful completion of the defense, you make any necessary changes to the thesis and submit a final and properly formatted draft to the Graduate School no later than two weeks prior to the last day of classes for the term or semester. If the manuscript meets the style and format criteria established by the English faculty, you will be permitted to submit the document to your advisory committee for approval and signature.

Your thesis committee members, school/college graduate program coordinator, department head, and dean sign off on your thesis. The appropriate form can be obtained from the Department.

Once you have all of your forms signed and your thesis printed, you must get three bound copies made and present them to the Dean of the Graduate School on or before the last day of classes for his approval and signature. The Graduate School will be responsible for distributing the copies to the appropriate offices.

If you choose the M.A. thesis option, you do not take the Comprehensive Examination.
Appendix E  College of Engineering Requirements

Main Body of the Thesis/Dissertation

The main body of the thesis or dissertation in The Roy G. Perry College of Engineering may be as follows:

Chapter 1  Introduction
Chapter 2  Background Research
Chapter 3  Methods
Chapter 4  Results
Chapter 5  Conclusions and Future Work
References
Appendices

The following serves as general guideline for the minimum requirements of what should be included in each chapter:

Chapter 1  Introduction

This chapter should contain the main motivation of the dissertation and summarize the problem being solved and its uniqueness within the scope of research. It should also present a brief summary of what has been achieved in the dissertation in terms of purpose, rational (or significance) of the problem, terminology and definition of terms used in the dissertation.

Chapter 2  Background Research

This chapter must produce substantial data about the background research that was conducted by the student in the subject area of research. The background research should contain references of previous published research of other researchers and should contain advantages and short comings of their research. It should also describe the scope and objective of research, and provide a brief description of the problem statement and illustrate why this problem is unique and has not been addressed previously.

Chapter 3  Methods

This chapter should describe the main body of the research conducted by the student, and provide modeling and method to validate the model, performance results using theoretical and/or experimental methods of the proposed problem solving. It should also summarize the results by describing the uniqueness of the problem solution. The detailed mathematical description can be presented as Appendices of the dissertation.
Chapter 4  Results

This chapter should describe the results of the study and any validation done by simulations and/or laboratory experimentation. The theoretical results of Chapter 3 should be demonstrably validated with the simulation.

Chapter 5  Conclusions and Future Work

This chapter should summarize the thesis or dissertation problem(s), research results, contributions to the engineering/science discipline in terms of applicability, limitations and possible future work.

References

The references used in the dissertation writing should be listed in this Chapter.

Appendices

One or more appendices should follow the Reference Section. These appendices must be referred appropriately in the main Chapters.
PRAIRIE VIEW A&M UNIVERSITY
GRADUATE SCHOOL
PRAIRIE VIEW, TEXAS

CERTIFICATION OF COMPLETION OF THESIS EXAM AND THESIS

____________________________________
Date

TO THE COMMITTEE OF GRADUATE STUDY:

The undersigned on this date examined student’s name for the awarding of the master’s degree and hereby certified that the examination was successfully completed.

____________________________________
(Advisor’s Name), Chair
(Title)
(Department)

____________________________________
(Committee member’s name)
(Title)
(Department)

____________________________________
(Committee member’s name)
(Title)
(Department)